

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Currently Amended) A method comprising:

establishing, with a network device, a communication session with a client;
receiving, with the network device, a lock command from the client via the
communication session;

locking candidate configuration data in response to the [[a]] lock command from [[a]] the
client to grant an archive system exclusive access to the candidate configuration data of the [[a]]
network device and lock the candidate configuration data so that no other clients can edit the
candidate configuration data, wherein the candidate configuration data represents an editable
working copy of current operational configuration data of the network device;

after locking the candidate configuration data, receiving a load command from the client
and, in response to the load command, loading, from the archive system, archived configuration
data that represents previous operational configuration data of the network device to replace the
locked candidate configuration data; and

in response to a first commit command from the client, temporarily committing the
candidate configuration data to temporarily restore the archived configuration data as the
operational configuration data of the network device;

upon temporarily committing the candidate configuration data, enabling a timer within
the network device;

in response to receiving a second commit command from the client prior to the timer
exceeding a pre-set time limit, permanently committing the candidate configuration data to
restore the archived configuration data as the operational configuration data of the network
device;

upon expiration of the timer without receiving the second commit command with the network device, executing a first rollback to undo any changes to the operational data from the archived configuration data as loaded into the candidate configuration data; and

upon failure of the communication session prior to receiving the second commit command, executing a second rollback to undo any changes made to the candidate configuration data by the archived configuration data to ensure the candidate configuration is synchronous with the operational configuration of the network device.

Claims 2-6 (Cancelled).

Claim 7 (Currently Amended) The method of claim 1[[6]],
wherein the load command comprises an override attribute; and
wherein loading the archived configuration data in response to receiving the load command includes discarding the entire candidate configuration and replacing the discarded candidate configuration data with the archived configuration data in response to the override attribute of the load command.

Claims 8-11 (Cancelled).

Claim 12 (Currently Amended) The method of claim 1, further comprising, after successfully permanently committing the candidate configuration data in response to receiving the second commit command prior to the timer exceeding the pre-set limit, unlocking the candidate configuration data.

Claim 13 (Currently Amended) The method of claim 12, wherein unlocking the candidate configuration data occurs in response to receiving an unlock command after receiving the second commit command.

Claim 14 (Original) The method of claim 13, wherein locking candidate configuration data permits only a single client to edit the candidate configuration data and unlocking the candidate configuration data allows one or more clients to simultaneously edit the candidate configuration data.

Claim 15 (Original) The method of claim 1, wherein committing the candidate configuration comprises:

- generating a configuration patch that lists any differences between the candidate configuration data and the operational configuration data; and

- applying the configuration patch to the operational configuration data to update the operational configuration data in accordance with the differences.

Claim 16 (Original) The method of claim 15, wherein generating a configuration patch comprises:

- creating a temporary copy of the candidate configuration data;
- merging the operational configuration data into the temporary copy to generate a list of updated configuration objects; and
- generating the configuration patch to list the updated configuration objects.

Claim 17 (Currently Amended) A device comprising:

memory to store current operational configuration data and candidate configuration data, wherein the candidate configuration data represents an editable working copy of the current operational configuration data;

a timer;

a control unit;

a control unit configured to establish a communication session with a client and present a user interface to the client for modifying the operational configuration data via the communication session, the user interface configured to support a first commit command that requires explicit confirmation by a second commit command from the client within a time period; and

wherein, upon receiving a lock command from the client, the control unit is configured to lock the candidate configuration data and grant an archive system exclusive access to the candidate configuration data, wherein the candidate configuration data represents an editable working copy of current operational configuration data;

wherein, upon receiving a load command from the client, the control unit is configured to load from the archive system archived configuration data that represents previous operational configuration data to replace the locked candidate configuration data;

wherein, in response to the first commit command from the client, the control unit is configured to temporarily commit the candidate configuration data to temporarily restore the archived configuration data as the operational configuration data and, upon temporarily committing the candidate configuration data, enables the timer;

wherein, in response to receiving the second commit command from the client prior to the timer exceeding a pre-set time limit, the control unit is configured to permanently commit the candidate configuration data to restore the archived configuration data as the operational configuration data;

wherein, upon expiration of the timer without receiving the second commit command from the client, the control unit is configured to execute a first rollback to undo any changes to the operational data from the archived configuration data as loaded into the candidate configuration data; and

wherein, upon failure of the communication session prior to receiving the second commit command, is configured to execute a second rollback to undo any changes made to the candidate configuration data by the archived configuration data to ensure the candidate configuration is synchronous with the operational configuration of the network device.

~~to lock the candidate configuration data, load archived configuration data that represents previous operational configuration data of the network device to replace the locked candidate configuration data, and commit the candidate configuration data to restore the archived configuration data as the operational configuration data of the device.~~

Claims 18-22 (Cancelled).

Claim 23 (Currently Amended) The device of claim 17~~22~~,
wherein the load command comprises an override attribute; and
wherein the control unit discards the entire candidate configuration and replace the discarded candidate configuration data with the archived configuration data when the override attribute is enabled.

Claims 24-27 (Cancelled).

Claim 28 (Currently Amended) The device of claim 17, further comprising the control unit configured to unlock the candidate configuration data after successfully permanently committing the candidate configuration data in response to receiving the second commit command prior to the timer exceeding the pre-set limit.

Claim 29 (Currently Amended) The device of claim 28, wherein the control unit unlocks the candidate configuration data occurs in response to receiving an unlock command after receiving the second commit command.

Claim 30 (Original) The device of claim 28, wherein locking candidate configuration data permits only a single client to edit the candidate configuration data and unlocking the candidate configuration data allows one or more clients to simultaneously edit the candidate configuration data.

Claim 31 (Original) The device of claim 17, wherein committing the candidate configuration comprises the control unit to generate a configuration patch that lists any differences between the candidate configuration data and the operational configuration data, and apply the configuration patch to the operational configuration data to update the operational configuration data in accordance with the differences.

Claim 32 (Original) The device of claim 31, wherein generating a configuration patch comprises the control unit to create a temporary copy of the candidate configuration data, merge the operational configuration data into the temporary copy to generate a list of updated configuration objects, and generate the configuration patch to list the updated configuration objects.

Claims 33 (Currently Amended) A method comprising:

establishing a communication session from a client device to a network device to be configured;

issuing a lock command from ~~[[a]]~~ the client device to the network device via the communication session ~~to lock candidate configuration data~~ to request exclusive access to the candidate configuration data of ~~[[a]]~~ the network device and lock the candidate configuration so that no other clients can edit the candidate configuration data, wherein the candidate configuration data represents an editable working copy of current operational configuration data of the network device;

issuing a load command to load archived configuration data that represents previous operational configuration data of the network device to replace the locked candidate configuration data; ~~and~~

issuing a first commit command to commit the candidate configuration data to temporarily restore the archived configuration data as the operational configuration data of the network device for only a pre-set time limit;

after issuing the first commit command and before expiration of the pre-set time limit, integrity testing the network device with the client to determine whether the network device is rendered inoperable by the restored archived configuration; and

when the network device is operable, issuing a second commit command within the pre-set time limit to permanently commit the candidate configuration data as the operational configuration data of the network device.

Claim 34 (Cancelled).

Claim 35 (Previously Presented) The method of claim 34, wherein the lock command and load command comprise a failsafe attribute and an override attribute respectively, wherein the failsafe attribute causes a rollback command to undo changes made when the archived configuration data replaced the locked candidate configuration data in response to failure of the session prior to issuing the commit command, and the override attribute causes discarding of the candidate configuration data and replacement of the discarded candidate configuration with the archived configuration data.

Claims 36-38 (Cancelled).

Claim 39 (Original) The method of claim 33, further comprising accessing a memory to retrieve the archived configuration data.

Claim 40 (Currently Amended) An archive system comprising:

a memory to store archived configuration data that represents previous operational configuration data of a network device; and

~~a computing device to issue a lock command to lock candidate configuration data, wherein the candidate configuration data represents an editable working copy of current operational configuration data of the network device, issue a load command to load the archived configuration data to replace the locked candidate configuration data, and issue a commit command to commit the candidate configuration data to restore the archived configuration data as the operational configuration data of the network device.~~

a computing device configured to establish a communication session from the archive system to a network device to be configured,

wherein the computing device of the archive system is configured to issue ~~issuing~~ a lock command from ~~[[a]] the archive system to the network device via the communication session to~~ ~~lock candidate configuration data~~ to request exclusive access to the candidate configuration data of ~~[[a]] the~~ network device and lock the candidate configuration so that no other clients can edit the candidate configuration data, wherein the candidate configuration data represents an editable working copy of current operational configuration data of the network device;

wherein the computing device is configured to issue ~~issuing~~ a load command to the network device to load the archived configuration data that represents previous operational configuration data of the network device to replace the locked candidate configuration data; and

wherein the computing device is configured to issue ~~issuing~~ a first commit command to the network device to commit the candidate configuration data to temporarily restore the archived configuration data as the operational configuration data of the network device for only a pre-set time limit;

wherein the computing device is configured to, after issuing the first commit command and before expiration of the pre-set time limit, integrity testing the network device with the client to determine whether the network device is rendered inoperable by the restored archived configuration; and

wherein the computing device is configured to, when the network device is operable, issue a second commit command within the pre-set time limit to permanently commit the candidate configuration data as the operational configuration data of the network device.

Claims 41-42 (Cancelled).

Claim 43 (Currently Amended) The archive system of claim 40, wherein the computing device of the archive system ~~issues a confirm commit command to temporarily commit the candidate configuration data to restore the archived configuration data as the operational configuration data,~~ is configured to perform integrity tests on the network device after issuing the first commit command to assess a state of one or more devices, and selectively issue the second commit command commit command based on the assessed state of the one or more devices.

Claims 44-55 (Cancelled).